

REMARKS

This paper is responsive to an Office Action mailed November 26, 2008. Prior to this response, claims 1, 6-14, 19-25, 30-38, and 43-47 were pending. Claims 1, 6-14, 19-25, 30-38, and 43-47 remain pending.

In Section 3 of the Office Action claims 1, 6-11, 13-14, 19-25, 30-35, 37-38, and 43-47 have been rejected under U.S.C. 103(a) as unpatentable over Pereira et al. ("Pereira"; "The MPEG-4 Book"), in view of Djupsjobacka et al. ("Djupsjobacka"; EP 0854650), Stone (US 2003/0056224), and Peng et al. ("Peng": Digital Television Application Manager). Regarding claims 1, 14, 25, and 38, the Office Action acknowledges that Pereira fails to disclose DVB multimedia with packetized DSM-CC U-U OC, where resources are retrieved from the DSM-CC U-U OC, but that Djupsjobacka discloses a DSM-CC OC address modification for the benefit received from a located URL. The Office Action acknowledges that Pereira does not disclose a local identifier (lid), but that Stone teaches the use of a lid to assign unique identifiers to resources. The Office Action states that it would have been obvious to use a lid to provide a human –readable name to provide a way to access resources, as taught by Stone, which is embedded in an IOD to bind and access BIFS or ODs, as taught by Pereira, "because by using a LID one can provide a unique local identifier for each specific resource to be accessed by a receiver." The Office Action further acknowledges that Pereira does not teach using a lid to locate resources in a DVB-MHP standard, but that Peng teaches a DVB-MHP Java category capable of

being used as an object carousel where resources can be located. The Office Action states that it would have been obvious to use Peng's Multimedia Home Platform to provide multimedia services, as taught by Pereira, "because DVB-MHP is a common platform for users to access a range of multimedia services which are commonly provided via object and data carousels. This rejection is traversed as follows.

In Section 7.4, Pereira discusses the transport of MPEG-4 over MPEG-2. Packetized PES structures are encapsulated in a PS or elementary stream (ES), and then repackaged as TS packets in a TS (7.4.1.2 - 7.4.1.3). Pereira does not disclose an MPEG-2 TS with a DSM-CC U-U OC. Pereira does not disclose MPEG-4 resources carried in an MPEG-2 TS. Pereira does not disclose a lid URI in the MPEG-2 TS, or the use of the lid URI to provide a binding name and access scheme to BIFS scene or object descriptor streams in an MHP OC.

Djupsjobacka discloses a communication system that uses an HTTP protocol URI in the transmission of interactive digital video broadcasting using DSM-CC protocols (pg. 3, ln. 41 through pg. 4, ln. 2, and pg. 7, ln. 2-25). Djupsjobacka does not disclose MPEG-4 resources carried in an MPEG-2 TS. Djupsjobacka does not disclose the use of a lid URI in a MPEG-2 TS, or the use of the lid URI to provide a binding name and access scheme to BIFS scene or object descriptor streams in an MHP OC.

Stone describes an Advanced Television Enhancement Forum (ATVEF) protocol system, which permits HTML, VRML, Java, or

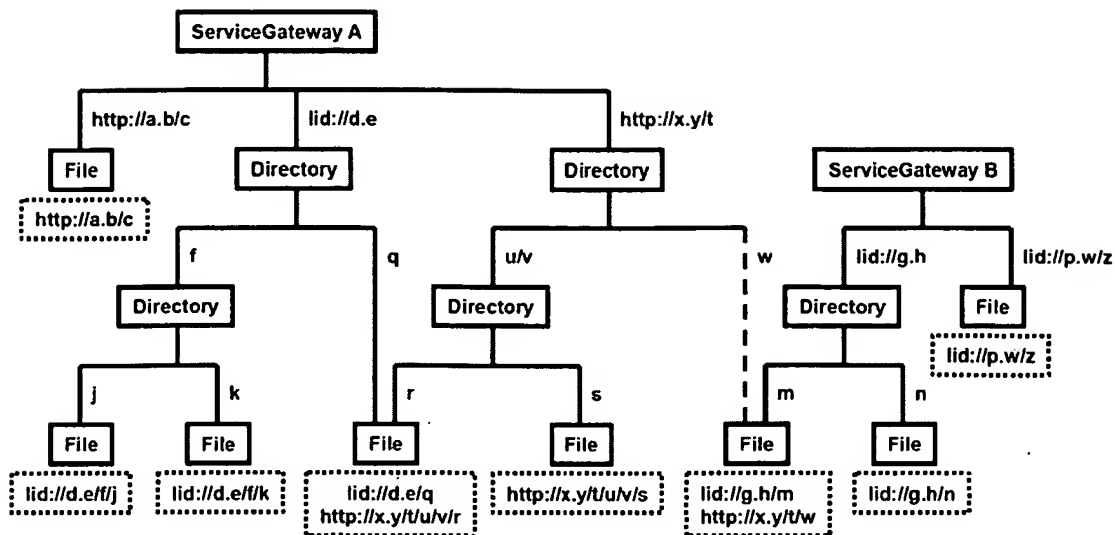
private data files to be delivered [0016]. Enhancements are delivered in real-time with the use of triggers, which always include a URL [0017]. A lid URL may be used in the header of a UHTTP to identify resources that should be stored locally by a receiver [0018]. Since Stone's system does operate in accordance with MPEG-4 or MPEG-2 protocols, Stone does not mention object descriptors (ODs), BIFS, IODs, or a DSM-CC U-U Object Carousel (OC). Using a lid in a UHTTP header is a far reach from embedding a lid in an IOD for the purpose of providing a name/access scheme to objects in a DSM-CC U-U OC. Alternately stated, the use of a lid to simply identify a resource to be locally stored (Stone), hardly suggests the use of lid to provide access to MPEG-4 resources in an MPEG-2 Object Carousel.

IOR, BIOProfileBody, and NSAP are address schemes specified in the DSM-CC specification to uniquely identify an object in an Object Carousel (OC). DSM-CC is a part of MPEG-2 (Part 6), and a DSM-CC OC and its defined address structure schemes (such as IOR, NASP, etc.) can be used to carry any kind of data including MPEG-4 files, JPEG files, or Microsoft word documents, to name a few examples. Further, a DSM-CC OC can be used to build a hierarchical directory structure to carry these types of data.

In contrast, a MPEG-4 system is built around an Initial Object Descriptor (IOD), no matter if it is carried over MPEG-4 File Format, IP, or any kind of transport. IOD is the entry gateway of the MPEG-4 system, from which all other elementary streams (ES) such as scene, video, audio, are linked together. In the MPEG-4 specification, there are only two linkage (reference/address) methods defined, one is

called elementary stream identifier (ES-ID), the other is URL. The specification does not permit any other address scheme. An ES-ID is unique to each ES, so a decoder can find the ES in the transport stream by identifying its ES-ID. A URL is also unique to each ES. The claimed invention uses a lid type of URL/URI.

Therefore, although an MPEG-2 can carry MPEG-4 data, the data is not carried in accordance with the MPEG-4 specification. An MPEG-2 OC does not provide a way to encode or decode MPEG-4 resources. Alternately stated, MPEG-4 specification does not mention or permit any specific MPEG-2 OC address schemes such as IOR or NSAP addresses. Only ES-ID and URL/URI address schemes are permitted for MPEG-4 encoding/decoding.



The claimed invention describes a system that carries data in an MPEG-2 OC. However, the use of a lid URI permits an MPEG-4 to encode or decode MPEG-4 data in the OC. That is, the use of a lid URI decouples the addressing (binding) scheme from the one defined by the OC. In fact, it doesn't matter what addressing scheme the MPEG-2 OC uses, as long as the lid URI linkages are present. A URI based hierarchical directory structure is as shown above (Fig. 6 of the specification). Each object is referenced by a lid or http URI (some are referenced both by a http and a lid). Each object also has a NSAP address because it is an object in the DSM-CC OC. However, only the base URI need be associated with an NSAP address in the DSM-CC OC. Once the linkage is created, the rest of the objects can be referenced relatively in the OC. Note however, that a NASP address is not the same as a URI address. Likewise, the address schemes are different. However, an object may have an address in both schemes.

Peng teaches a DVB-MHP standard and an MPEG-2 DSM-CC U-U carousel (pg. 104). Pend does not teach how his DSM-CC U-U

carousel can be used in the context of MPEG-4 communications. Peng does not disclose to the use of a lid embedded in an IOD, to provide a binding name and access scheme to objects in a DSM-CC U-U OC.

An invention is unpatentable if the differences between it and the prior art would have been obvious at the time of the invention. As stated in MPEP § 2143, the *KSR International Co. v Teleflex Inc.* decision (82 USPQ2d 1385, 1395-1397, 2007) suggests 7 exemplary rationales to support a conclusion of obviousness, which include:

A) Combining prior art elements according to known methods to yield predictable results;

B) Simple substitution of one known element for another to obtain predictable results;

C) Use of known technique to improve similar devices (methods, or products) in the same way;

D) Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results;

E) “Obvious to try” – choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success;

F) Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations are predictable to one of ordinary skill in the art;

G) Some teaching, suggestion, or motivation in prior art would have lead one of ordinary skill to modify the prior art reference or the combine prior art references teachings to arrive at the claimed invention.

The Office Action states that modifications to the Pereira would have been obvious to one of ordinary skill in the art in light of Djupsjobacka, Stone, and Peng. This rejection appears to be most closely grounded in the G) rationale - Some teaching, suggestion, or motivation in prior art would have lead one of ordinary skill to modify the prior art reference or the combine prior art references teachings to arrive at the claimed invention.

With respect to this rationale, MPEP 2143 (G) states that the rejection must articulate the following criteria to resolve the *Graham* factual analysis:

(1) a finding that there was some teaching, suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings;

(2) a finding that there was a reasonable expectation of success; and

(3) whatever additional findings based on the *Graham* factual inquiries may be necessary, in view of the facts of the case under consideration, to explain a conclusion of obviousness.

With respect to the above-referenced first factual analysis criteria, the Djupsjobacka, Stone, and Peng reference has been combined with the Pereira based upon the assumption that the combination discloses all the limitations recited in Applicant's claims 1, 14, 25, and 38. However, none of the references disclose the use of MPEG-2 DSM-CC OC transmissions to carry MPEG-4 resources. None of the references disclose a lid embedded in an Initial Object Descriptor (IOD). None of the

references disclose a lid providing a binding name and access scheme to a DSM-CC U-U OC. None of the references disclose the use of a lid to locate BIFS scene or object descriptor streams in an MHP OC, as recited in claims 1, 14, 25, and 38. Claims 6-11 and 13, dependent from claim 1, claims 19-24, dependent from claim 14, claims 30-35 and 37, dependent from claim 25, and claims 43-47, dependent from claim 38, enjoy the same distinctions.

The Office Action states that it would have been obvious to apply the features of Djupsjobacka to the Pereira to enable benefits such as hierarchical naming and program server assignment to individual names. However, the concepts of hierarchical naming and program server assignment do not suggest a means that enable an MPEG-2 scheme to transport MPEG-4 resources. The Office Action states that it would have been obvious to use Peng's Multimedia Home Platform to provide multimedia services, as taught by Pereira, "because DVB-MHP is a common platform for users to access a range of multimedia services which are commonly provided via object and data carousels. However, Peng does not explicitly describe or suggest how MPEG-4 resources can be provided via object and data carousels.

The Office Action states that it would have been obvious to use a lid to provide a human-readable name to provide a way to access resources, as taught by Stone, which is embedded in an IOD to bind and access BIFS or ODs, as taught by Pereira, "because by using a LID one can provide a unique local identifier for each specific resource to be accessed by a receiver." However, neither Pereira nor Stone suggest that a lid can be used in the transport of either MPEG-2 or MPEG-4 resources.

Neither Pereira nor Stone suggest that a lid can be used as a link between an MPEG-2 DSM OC and MPEG-4 resources carried in such a carousel. In particular, neither reference suggests that a lid can be embedded in an IOD to act as a gateway to MPEG-4 resources organized in an OC.

The *prima facie* analysis of motivation provided in the Office Action fails to suggest how a practitioner in the art would combine the references in such a way as to make obvious a lid URI in an MPEG-2 TS, or the use of the lid URI to provide a binding name and access scheme to BIFS scene or object descriptor streams in an MHP OC. These are limitations that are explicitly recited in the claimed invention and missing in the prior art references. Therefore, the claimed invention can only be obvious if an artisan makes substantial modifications to the Pereira. However, there is nothing in the Djupsjobacka, Stone, and Peng references that suggests a modification based upon the use of lid URIs to locate MPEG-4 resources enabled as BIFS scene descriptor streams or object descriptor streams, embedded in an MHP OC. Alternately stated, the mere mention of a lid URI (in an ATVEF context) does not suggest its use for a different purpose in a different protocol.

Neither does the obviousness rejection provide evidence that such a modification would have been obvious to one with skill in the art based upon what was well known at the time of the invention. “(A)nalysis [of whether the subject matter of a claim would have been obvious] need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.”

KSR Int'l Co. v. Teleflex, Inc., 127 S. Ct. 1727, 1740-41, 82 USPQ2d 1385, 1396 (2007). However, if the *prima facie* rejection is supported by what was known by a person of ordinary skill in the art then additional evidence should have been provided. Notable, when the source or motivation is not from the prior art references, “the evidence” of motive will likely consist of an explanation or a well-known principle or problem-solving strategy to be applied”. *DyStar*, 464 F.3d at 1366, 80 USPQ2d at 1649. The principles of hierarchical naming and accessing multimedia services is not evidence that it was well known at the time of the invention to use a lid URI in an MPEG-2 TS, or to use a lid URI to provide a binding name and access scheme MPEG-4 resources enabled as BIFS scene or object descriptor streams in an MHP OC.

With respect to the second analysis criteria needed to support the G) obviousness rationale, even if an artisan were given the Pereira, Djupsjobacka, Stone, and Peng references as a foundation, no evidence has been provided to show that there is a reasonable expectation of success in the claimed invention. That is, there can be no reasonable expectation of success if the references, and what was known by artisan at the time of the invention, do not teach all the limitations of the claimed invention.

In summary, the Applicant respectfully submits that a *prima facie* case of obvious has not been supported since the combination of the Pereira, Djupsjobacka, Stone, and Peng does not explicitly disclose every limitation of claims 1, 14, 25, and 38. Neither has a case been supported that Pereira can be modified to supply the missing limitations in view of

Djupsjobacka, Stone, and Peng or what was well known by a person of skill at the time of the invention. Therefore, the Applicant requests that the rejection of claims 1, 6-11, 13-14, 19-25, 37-38, and 43-47 be removed.

The Office Action has rejected claims 12 and 36 under 35 U.S.C. 103(a) as unpatentable with respect to Pereira, Djupsjobacka, Stone, and Peng, in view of Herpel (Elementary Stream Management in MPEG-4). The Office Action acknowledges that Pereira does not disclose caching MPEG-4 resources, but that Herpel discloses such a feature, and that it would have been obvious to incorporate the teaching of Herpel into Pereira because MPEG-4 resources may need to be accessed at a later time. This rejection is traversed as follows.

Beginning on page 319, Herpel discloses a system decoder model (SDM), which is used to specify the behavior of a receiving MPEG-4 terminal. In Section IV C (page 321) Herpel states that MPEG-2 TSs may be used to encapsulate MPEG-4 streams. Three approaches are presented on page 322 for encapsulating MPEG-4 streams in an MPEG-2 TS, they are: 1) Single Stream Encapsulation; 2) FlexMux Stream Encapsulation; and, 3) Digital Storage Media.

In Section II-A, Herpel discloses OD components. As clearly stated by Herpel in the first paragraph under Section II (page 315, column 2), Herpel is describing an MPEG-4 system. This description is similar to the Applicant's explanation of Fig. 1. Herpel's description does not discuss the use of an MHP OC in an MPEG-2 TS, or a lid component in an MPEG-2 TS.

The obviousness rejection is based upon the assumption that Pereira, Djupsjobacka, Stone, and Peng disclose all the limitations of amended claims 1 and 25. However, as noted above, this combination fails to disclose the use a lid URI in the MPEG-2 TS, or the use a lid URI to provide a binding name and access scheme to BIFS scene or object descriptor streams in an MHP OC. Likewise, Herpel fails to disclose these limitations. Therefore, even if Herpel is combined with the Pereira, Djupsjobacka, Stone, and Peng, the combination of references still fails to explicitly describe every limitation of claims 1 and 25.

Neither does the motivation of accessing MPEG-4 resources at a later time suggest modifications to the Pereira that would make obvious the above-cited claim limitations. For example, there is no suggestion in the Herpel reference that lid URIs in an MPEG-2 TS can be used to access embedded MPEG-4 resources in an MHP OC directory using a binding name and access scheme. Since the combination of references neither explicitly discloses all the claim limitations, nor suggests modification to the Pereira that would make all the limitations obvious, the Applicant requests that the rejection of claims 12 and 36 be withdrawn.

The Applicant submits that the claimed art can be distinguished from the prior art made of record, but not relied upon in the Office Action. It is believed that the application is in condition for allowance and reconsideration is earnestly solicited.

Respectfully submitted,

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